In the preferred embodiments described above, catalogue data is down-loaded into the pen from a remote processing system by telephone, over the telecommunications interface. However, as an alternative to down-loading, for example a complete catalogue, via the telephone line, other data entry means could be provided for the bulk of the data, the telephone line then only being used for updating the stored data. For example the pen and/or the base unit as appropriate could be provided with a socket or connector or reader for a memory device (such as a plug-in ROM, a smart card, etc.).

Although no speaker is illustrated in the examples of the pen described with reference to FIGS. **3** and **8**, a speaker or other sound generator could be provided as in the FIGS. **9** and **10** embodiments for giving audio feedback to report on the correct reading, or otherwise, of a code. Thus, for example, when a code is correctly read, one beep can be sounded, and when a code is incorrectly read, two beeps could be sounded. Alternatively, appropriate synthetic or recorded voice messages could be output.

Although in the examples described above the plane of the display in generally parallel to the axis of the pen, the plane of the display **20** could be arranged to slope progressively towards the axis of the pen away from the head end of the pen to reduce the angle between the normal to the plane of the display and the line of sight of the user.

Also, although in the present examples two mechanical key switches are provided, in other embodiments one key switch only could be provided. Operating that key switch a predetermined number of times within a short period could be used to emulate the provision of two key switches for scrolling and other functions. More key switches could also be provided in other embodiments. For example, a numerical keypad could be provided. However, in preferred embodiments of the invention, the number of keys should be kept as low as possible for any particular application. As in the embodiments described above, two key switches are preferred. The control sheet or data carrier effectively forms a keyboard extension for the pen.

Although in the example of a card or other carrier shown in FIG. **6** a set of bar codes for only numeric and command codes are indicated, if desired a set of bar codes for the complete alphabet could be provided. Alternative arrangements of the codes would also be possible, for example a complete set of codes and corresponding characters could be arranged in the format of a standard typewriter keyboard layout. The codes could also be incorporated in the letters and numerals, for example extending as a strip across the letters and numerals. For example, a bar code could replace the cross bar in a capital "A", and similar modifications for the other letters of the alphabet.

Also, as mentioned above, in appropriate embodiments of the invention, codes other than bar codes or dot codes could be used. For example a symbol blob code could be used, this requiring about 1 Kbyte of storage for decoding purposes. Indeed, in other embodiments of the invention full character recognition (OCR) could be employed where the reading sensor is in the form of a camera or other scanning sensor incorporated in the reading head. With a camera and appropriate recognition logic, the pen could be used, for example, for fingerprint recognition, either as an aim in itself, or for user validation purposes.

In a merchandising system, where bar codes or other codes are associated with merchandisable items, this could be achieved simply by means of a printed catalogue, or some other form of list, or as a result of codes applied to examples of the products in question, or as a result of codes displayed, for example, on a TV screen with images relating to those products. The only requirement is that the display of the codes are readable by the data entry system of the present invention.

Features from the respective embodiments of the invention described above could also be combined as desired to provide a configuration appropriate for a particular application.

Thus, for example, the audio telephony functions described with reference to the embodiment of FIGS. **10** to **12** could be incorporated in the hand held or base unit, as appropriate, of the other embodiments of the invention.

Although in the specific embodiments described above the telecommunications interface for the telephonic transmission of information is only provided in a hand held unit where no base unit with a telecommunications interface is provided, it will be appreciated that a hand held unit with a telecommunications interface could be combined with a base unit also having a telecommunications interface, either of the same or a different type.

The invention claimed is:

1. A self-contained hand held unit which is a cellular telephone handset operable for voice transmission and reception by a user, comprising:

(A) a speaker and a microphone permitting said hand held unit to be used as a telephone handset;

(B) a plurality of mechanical key switches;

(C) rewritable storage made of solid state memory, wherein said hand held unit is operable to retain data or information in said storage in response to user input, and operable to retain downloaded description information in said storage relating to user selectable items for later user access;

(D) a antenna;

(E) a rechargeable power supply;

(F) a sensor operable to sense user commands or data;

(G) a display screen coupled to said sensor, wherein said hand held unit is operable to process code wherein a said code includes data visible and selectable by a user and is associated with a user selectable item, and in response to user input including a selection of visible data of a said code by use of said hand held unit, a said code is processed, wherein subsequent to said hand held unit processing a said code, said display screen displays user readable information for said user selectable item associated with a said code;

(H) wherein further said display screen:

(i) is operable to display selected information retained by said storage, to display commands, and to display a list of selectable items, wherein items from said list are individually selectable from said display screen by use of said sensor;

(ii) is operable to display a selected language of a number of display languages to assist a user in operating said hand held device, wherein a user is able to select a said language, and said number of display languages includes English and at least one language other than English;

(I) a wireless connector coupled to said storage, wherein said wireless connector is configured to permit said hand held unit to establish a wireless link to a peripheral device separate from said hand held unit, wherein said wireless link is made of short range radio signals;

(J) a cellular telecommunications interface coupled to said antenna and operable to communicate via said antenna with a cellular telecommunications network operable for transmitting and receiving voice and data, wherein said cellular telecommunications interface also is operable to transmit from said storage data captured by use of said hand held unit;